



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

New York, March 24, 1916. No. 28



Published to advance the Science of cold-blooded vertebrates

A RECORD OF THE BERMUDA CHUB (*KYPHOSUS*) FROM LONG ISLAND, NEW YORK.

A Bermuda Chub (*Kyphosus sectatrix*) was taken November 2, 1915, at Orient, Long Island, in Long Island Sound. It was 10 inches long, 3 inches deep, 1 inch thick in widest part near the head. The specimen has been identified by the Department of Fishes of the American Museum of Natural History, New York, from a photograph taken of it at the time of capture.

I have been about pound-fishing for over twenty years on the east end of Long Island, and this is the first specimen of this species that I have seen.

ROY LATHAM,
Orient, N. Y.

AQUARIUM CULTURE OF TRICHO- GASTER LALIUS.

Of all the Labyrinth-fish so far known in this country not one has been such a general favorite as *Trichogaster lalius*, commonly called Dwarf Gurami. Seldom more than two inches in length, this little beauty, which was first imported from India into Europe in 1903, has, through its interesting habits in breeding and general graceful bearing, quickly found many friends in the Aquarium world. At first ex-

tremely shy, and hiding itself away at the slightest disturbance, with proper care it soon becomes tame. It is interesting to see them go up to any new stone or other object which has been placed in the aquarium and examine it with their feelers.

The principle color extending over the body of the male, excepting the fins and tail, is steel blue, with irregular orange zigzag bands running vertically. The fins and tail (except the pectoral fins) are orange, mottled with a great number of red spots the size of a pin-head, the edges of the fins are blue with bright red tips. During the mating and breeding seasons these already bright colors are greatly intensified. The pale orange becomes redder and the blue throat a most brilliant dark steel blue.

The nest-building habits are somewhat different from those of the other fish of this family. Whereas Paradise fish, and other Guramis, Fighting-fish, etc., make their nest entirely of air bubbles, *Lalius* utilizes small pieces of plants, roots, algae, etc., to form a somewhat dome-shaped structure which projects above the surface and is about two inches in diameter. Under this he builds his bubble nest. The completion of his nest will take him about a day, and there is not a second of rest or inactivity during this process. One minute one may see him tearing on a decomposed plant leaf and carrying the pieces so gotten to the spot chosen for the nest where they are thrown into a compact mass on the surface of the water, the next minute he may be seen chasing his perhaps too inquisitive and eager mate around the tank, punishing her with plainly heard whacks, until she retires to her undisputed hiding place. It is not obvious how the sound, something like that from snapping ones fingers, is produced. Or he may be at the surface of the water taking in air so that one might think he were trying to fill his whole body. After getting his supply he retires under the nest and fills the whole inside of the fibrous mass with small air bubbles.

After its completion he tries to induce the female to come under the nest. In many cases he can get her there only after a wild chase around the tank, but very often the female after watching the male finish his task in building the nest comes without urging to deliver her eggs. Now the male, resplendent in his most gorgeous colors, all atremble, after circling around her a few times, folds or bends himself around her body, at the same time turning her on her back, and then the hardly visible eggs are expurgated, fertilized, and rise into and between the bubbles of the nest.

Hatching takes place, according to the temperature, in from 12 to 40 hours. The newly hatched fish are hardly visible. They are only discernible when they move, their eyes being practically the only things noticeable, as their bodies are perfectly clear and not distinguishable from the water. It is always advisable to remove the female immediately after the eggs are safely in the nest, as she is liable to dart up and eat them before her watchful mate can prevent her. As with all Labyrinth fish the male takes care of the eggs and young until the latter are able to leave the nest, and then he, too, should be taken out of the tank.

In order to be successful in raising the young ones, an even temperature of the water of at least 70° is absolutely necessary. It should not be more than three inches deep and there should be plenty of algae and plants such as *Salvinia*, *Riccia*, where the youngsters can find their food and a place to hide. In artificial feeding great care has to be taken not to feed too much, as any food left to decay will cause untold trouble. In giving live food such as small *Daphnia* or *Cyclops*, it is imperative to strain these through a very fine hair sieve, as the most minute only are fit for the young fish. Should any of the big ones get into the tank, they will in a few days time destroy and eat the fish. One of the worst enemies

which are liable to infest the tank when feeding live food are hydras, which in a very short time will destroy a whole brood, and it is very difficult to rid a tank of this pest.

Lalius will breed three or four and even more times during a season, the first broods always being more numerous and stronger than the later ones, but it is good policy not to let the fish breed too often, as the drain on their vitality may be too much and prove fatal.

RICHARD DORN,
Upper Montclair, N. J.

AMBLYSTOMA TIGRINUM ON LONG ISLAND, I.

After many years of futile search for *Amblystoma tigrinum* on Long Island, the past season has been unexpectedly productive in furnishing records of both adults and larvae of this species.

Records of Adults.

"*Rancocas*," the first and apparently specific record by William L. Sherwood (Linn. Soc. 1894-95, No. 7), is a misprint as no such place exists on Long Island. Mr. Sherwood admits this, yet in reasserting the occurrence of the species he prefers to withhold the right name of the station, fearing extermination.

Patchogue, 1 specimen from salt marshes near Swan Creek, identified from photograph by Dr. Frank Overton, who reports its capture "some years ago."

Syosset, November, 1914. 1 Specimen 8½ inches, found near drain, cement basement, 1 Hudson Estate. Sent to N. Y. Zool. Park and is still living.

Yaphank, August 24, 1915. 1 specimen 8½ inches found in cellar, A. C. Weeks. Presented to Brooklyn Museum. Still living.